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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/615,088	Applicant(s) YEOH ET AL.
	Examiner DAVID P. RASHID	Art Unit 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 February 2009.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 24-36 is/are pending in the application.

4a) Of the above claim(s) 34-36 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 24-33 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/0256/06)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

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Continued Examination Under 37 C.F.R. § 1.114

[1] A request for continued examination under 37 C.F.R. § 1.114, including the fee set forth in 37 C.F.R. § 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R. § 1.114, and the fee set forth in 37 C.F.R. § 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R. § 1.114. Applicant's submission filed on Feb. 2, 2009 has been entered.

Amendments & Claim Status

[2] This office action is responsive to Amendment Submitted with Filing of RCE received on Feb. 2, 2009. Claims 24-36 pending; claims 1-3, 5-6, 9-10, and 19-23 cancelled.

Election by Original Presentation

[3] Newly submitted **claim 34-36** directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 34-36 are substantially similar to the originally presented claims 11-18 that were restricted. See Claims at claims 11-18, Jul. 8, 2003; and Requirement for Restriction/Election at p. 2 (claim 11 and now claim 34 being directed to alternate Species II).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 34-36 withdrawn from consideration as being directed to a non-elected invention. See 37 C.F.R. § 1.142(b) and M.P.E.P. § 821.03.

Response to Arguments

[4] Applicant's Remarks filed Feb. 2, 2009 with respect to claims 24-33 have been respectfully and fully considered, but are not found persuasive.

Summary of Remarks regarding Rejections under 35. U.S.C. § 103

In contrast, the references cited by the Examiner disclose selecting document registration parameters based upon image data luminance (i.e., grey level) values.

Remarks at 9.

However, though *Buchar et al.* does not teach the gray level values including chrominance values, *Lubin et al.* teaches wherein image data (fig. 2, item 205) comprises chrominance values ("C'b" and "C'r" at fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.* at 9:3-9.

In addition, YCbCr colorspace including chrominance has been known to be advantageous (as opposed to RGB or gray scale) for improved compression.

Claim Rejections - 35 U.S.C. § 112

[5] In response to the Amendments to the Claims received on Feb. 2, 2009, the previous § 112 rejections are withdrawn.

[6] The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Lack of Enablement

MPEP § 2107.01(IV) reads, in relevant part:

A deficiency under the utility prong of 35 U.S.C. § 101 also creates a deficiency under 35 U.S.C. § 112, first paragraph. See *In re Brana*, 51 F.3d 1560, 34 USPQ2d 1436 (Fed. Cir. 1995); *In re Jolles*, 628 F.2d 1322, 1326 n.10, 206 USPQ 885, 889 n.11 (CCPA 1980); *In re Fouche*, 439 F.2d 1237, 1243, 169 USPQ 429, 434 (CCPA 1971) ("If such compositions are in fact useless, appellant's specification cannot have taught how to use them."). Courts have also cast the 35 U.S.C. § 101/35 U.S.C. § 112 relationship such that 35 U.S.C. § 112 presupposes compliance with 35 U.S.C. § 101. See *In re Ziegler*, 992 F.2d 1197, 1200-1201, 26 USPQ2d 1600, 1603 (Fed. Cir. 1993) ("The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. § 101 that the specification disclose as a matter of fact a practical utility for the invention. ... If the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. § 112.")

Claims 28-33 are rejected under 35 U.S.C. § 101 because the claimed invention is not supported by either a substantial asserted utility or a well established utility. See 101 USC § 101 rejection above.

Claims 28-33 are also rejected under 35 U.S.C. § 112, first paragraph. Specifically, since the claimed invention is not supported by either a substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 U.S.C. § 101

[7] 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In Re Bilski – “Tied To” Criteria and/or Qualifying “Transformation”

Claims 28-33 are rejected under 35 U.S.C. § 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory “process” under 35 U.S.C. § 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

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nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

A process must have either a meaningful tie to an “apparatus”, or “machine”, or the process must perform a qualifying transformation. With regard to (1) above, insignificant pre- or post-solution activity involving an “apparatus”, or “machine” is not a meaningful tie. Claim 28 recites “obtaining image data comprising a representative sample of the backing surface”. The machine required must be significant to the inventive concept (and not pre- or -post processing, or intended use statements as recited immediately above). In addition, when such machine is introduced and significant to the inventive concept, it must be a particular machine (e.g., a “processor”, not a “machine”).

With regard to (2) above, the pixels in the video image do not represent a physical object, nor is there any modification with external depiction separate from any insignificant pre- or post-solution activity, or intended use statements as recited immediately above. Claims 29-33 are rejected for failing to alleviate the deficiency of their respective dependent.

Claim Rejections - 35 U.S.C. § 103

[8] The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Buchar et al. in view of Lubin et al.

[9] **Claims 24-33** are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pub. No. 2002/0126299 (published Sep. 12, 2002; hereinafter “Buchar et al.”) in view of U.S. Patent No. 6,137,904 (issued Oct. 24, 2000; hereinafter “Lubin et al.”).

Regarding **claim 24**, while *Buchar et al.* discloses in a document handler and imaging system (“improved document handler and imaging system” at para.0012), wherein different document sheets are sequentially moved past an imaging station by a document feeding system to be illuminated by a document illumination source and imaged by a document imager in the

document imaging station (“wherein different document sheets. . .document imaging station” at ¶0012),

wherein the document imaging station includes a document backing surface having a selected color and a scanning sensor having at least two color sensitive channels and wherein at least one edge of a document sheet is detected in said document imaging station by said document imager (“wherein the document imaging station. . .by said document imager” at ¶0012), the improvement comprising:

a registration parameter detection circuit, the registration parameter detection circuit receiving image data comprising a representative sample of the backing surface (“registration parameter detection circuit; the registration parameter detection circuit receiving a set of gray level values for the backing surface” at ¶0012),

the image data including gray level values in multiple channels for selected pixel locations along a scanline (“the two sets of gray level values including a first set of gray level values comprising a gray level value for selected pixel locations along a scanline” at para.0013);

and automatically determining an average gray level value for each of the multiple channels (“automatically determining an average gray level of the backing surface for each of the at least two sensitive channels” at ¶0012);

the registration parameter detection circuit automatically selecting a registration channel based on the average gray level value and determining a gray level deviation for the registration channel (“the registration parameter detection circuit automatically selecting a registration channel based on the average gray level for each of the at least two sensitive channels and determining a gray level deviation for the registration channel” at ¶0012); and

the registration parameter detection circuit automatically determining a registration parameter based on the average gray level value and the gray level deviation of the registration channel (“the registration parameter detection circuit automatically determining registration parameters based on the average gray level and the gray level deviation of the registration channel” at ¶0012), *Buchar et al.* does not teach the gray level values including chrominance values.

Lubin et al. teaches wherein image data (fig. 2, item 205) comprises chrominance values (“C’b” and “C’r” at fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.* at 9:3-9.

Regarding **claim 25**, while *Buchar et al.* discloses wherein the registration parameter detection circuit determines the grey level deviation for the registration channel as the difference between the maximum grey level value within the set of grey level value corresponding to the registration channel and the minimum grey level value within the set of grey level values corresponding to the registration channel ("gray level deviation is the difference between the maximum and minimum gray level received in a given for the scan" at ¶0035), *Buchar et al.* does not teach the gray level values including chrominance values.

Lubin et al. teaches wherein image data (fig. 2, item 205) comprises chrominance values ("C'b" and "C'r" at fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.* at 9:3-9.

Regarding **claim 26**, while *Buchar et al.* discloses a document handler and imaging system of claim 24, wherein the registration parameter detection circuit determines a registration parameter for a black average register (BAR) as a function of the average gray level of the registration channel ("BAR" at ¶¶0024, 0037, 0039; Claim 4), a step change register (SCR) as a function of the gray level deviation of the registration channel ("SCR" at ¶¶0024, 0037, 0039; Claim 4), and white average register (WAR) as a function of as both the average gray level and the gray level deviation of the registration channel ("WAR" at ¶¶0024, 0037, 0039; Claim 4), *Buchar et al.* does not teach the gray level values including chrominance values.

Lubin et al. teaches wherein image data (fig. 2, item 205) comprises chrominance values ("C'b" and "C'r" at fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.* at 9:3-9.

Regarding **claim 27**, while *Buchar et al.* discloses document handler and imaging system of claim 26, wherein the registration parameter detection circuit determines the registration parameter for the black average register (BAR) according to:

$$\text{BAR}_c = \begin{cases} C_{b_{\text{avg}}} \text{ if } C_{b_{\text{avg}}} \geq t_1 \\ t_1 \text{ if } C_{b_{\text{avg}}} < t_1 \end{cases}$$

(equation 3 at ¶0037) the registration parameter for the a step change register (SCR) according to

$$\text{SCR}_c = \begin{cases} \Delta_{cb} \text{ if } \Delta_{cb} \geq t_2 \\ t_2 \text{ if } \Delta_{cb} < t_2 \end{cases}$$

(equation 4 at ¶0037) and the registration parameter for white average register (WAR) according to

$$\text{WAR}_c = \begin{cases} C_{b_{\text{avg}}} + \Delta_{Cb} \text{ if } C_{b_{\text{avg}}} + \Delta_{Cb} \geq t_3 \\ t_3 \text{ if } C_{b_{\text{avg}}} + \Delta_{Cb} < t_3 \end{cases}$$

(equation 5 at ¶0037) wherein t_1 is the minimum backing chrominance threshold level, t_2 is the minimum step change level and t_3 is the minimum document chrominance threshold level required for detection processing (¶0038), *Buchar et al.* does not teach the gray level values including chrominance values.

Lubin et al. teaches wherein image data (fig. 2, item 205) comprises chrominance values ("C'b" and "C'r" at fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.* at 9:3-9.

Regarding **claim 28**, while *Buchar et al.* discloses a method of electronically registering documents supported by a selected backing surface (¶0012), comprising:

obtaining image data ("image data" at ¶0020) comprising a representative sample of the backing surface ("backing surface" at ¶¶0013-0014), the backing surface image data including gray level values ("gray level values" at ¶0013) in multiple channels ("at least two color sensitive channels" at ¶0012) for selected pixel locations along a scanline (¶0013);

determining average gray level values for each of the multiple channels ("automatically determining an average gray level..." at ¶0012);

selecting a registration channel (fig. 4, item 110) based on the average gray level values (¶0034);

determining a gray level deviation for the registration channel ("determining a gray level deviation for the registration channel" at ¶0012); and

determining a registration parameter (fig. 4, item 114; "determining registration parameters based on the average gray level" at ¶0012) based on the average gray level value of the registration channel, *Buchar et al.* does not teach the gray level values including chrominance values.

Lubin et al. teaches wherein image data (fig. 2, item 205) comprises chrominance values ("C'b" and "C'r" at fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.*, 9:3-9.

Regarding **claim 29**, *Buchar et al.* discloses further comprising providing a backing surface having a color being one of yellow, greenish-yellow, green and black (¶0036; claim 6)

Regarding **claim 30**, *Buchar et al.* discloses wherein the backing surface comprises a ski, the ski being adapted to be removably attached to a document handler (¶0027; claim 7).

Regarding **claim 31**, while *Buchar et al.* discloses wherein selecting said registration channel further comprises;

determining a gray level deviation for the registration channel (step (d) at ¶0013); and
determining registration parameters based on the average gray level value and the gray level deviation of the registration channel (step (e) at ¶0013), *Buchar et al.* does not teach the gray level values including chrominance values.

Lubin et al. teaches wherein image data (fig. 2, item 205) comprises chrominance values ("C'b" and "C'r" at fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the gray level values of *Buchar et al.* to include chrominance values as taught by *Lubin et al.* for "the advantage of reducing processing time and memory requirements by 50%. Luminance and chrominance processing are identical for options 1 and 2 since both options operate on full-height images." *Lubin et al.*, 9:3-9.

Regarding **claim 32**, claim 25 recites identical features as in claim 32. Thus, references/arguments equivalent to those presented above for claim 25 are equally applicable to claim 32.

Regarding **claim 33**, claim 26 recites identical features as in claim 33. Thus, references/arguments equivalent to those presented above for claim 26 are equally applicable to claim 33.

Conclusion

[10] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578 and fax number (571)270-2578. The examiner can normally be reached Monday - Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624

David P Rashid
Examiner
Art Unit 26244